

In the Claims:

Claims 1-5 (cancelled)

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6. (currently amended) A biopsy instrument comprising:

a base assembly comprising a firing mechanism;

a probe assembly detachably mounted to said base, said probe assembly comprising:

a cutter assembly comprising:

a cutter rotatable about its longitudinal axis; and~~a gear mechanism adapted to move said cutter;~~

a piercer assembly comprising:

a piercer having a tissue piercing tip and a side tissue receiving port spaced proximally from the tip, the piercer adapted to be carried distally toward a target by operation of the firing mechanism;~~a probe mount;~~and;~~a drive assembly detachably mounted to said cutter assembly, said drive assembly comprising:~~~~a flexible drive shaft;~~~~a transmission disposed proximally of the piercer, wherein the transmission is operable to provide motion of the cutter, wherein the transmission receives rotary motion about an axis angled with respect to the cutter's longitudinal axis, said transmission operatively connected to a distal end of said flexible drive shaft and said gear mechanism.~~

7. (currently amended). A medical device biopsy instrument comprising:

a biopsy instrument and a source of rotary motion separate from the biopsy instrument;

the biopsy instrument comprising a base, a probe assembly, and a transmission;

the a-base including a firing mechanism;

the a-probe assembly detachably mounted to said base, said probe assembly comprising:

a cutter assembly comprising:

a cutter having a longitudinal axis;

a gear mechanism adapted to move said cutter;

a piercer assembly comprising:

a piercer including a cutter lumen adapted to receive said cutter, a closed distal tip, and a tissue receiving port spaced proximally of the closed distal tip ;

a probe mount adapted to slideably connect said piercer to said cutter assembly; and

the transmission operative to receive rotary motion about an axis angled with respect to the cutter longitudinal axis from the external source of rotary motion and transmit rotary motion to the cutter assembly gear mechanism.

a drive assembly detachable mounted to said cutter assembly, said drive assembly comprising:

a flexible drive shaft angled with respect to the cutter longitudinal axis;

a transmission adapted to transmit motion from a distal end of said flexible drive shaft to said gear mechanism.

8 (currently amended). A transmission assembly for a biopsy medical instrument having a translatable and rotatable cutter, said transmission assembly comprising:

a first transmission portion receiving rotary motion about a first axis and transmitting rotary motion about a second axis angled with respect to the first axis to provide translation of the cutter; and

a second transmission portion receiving rotary motion about a third axis and transmitting rotary motion about a fourth axis angled with respect to the third axis to provide rotation of the cutter.

a rotation coupling assembly comprising:  
a rotation drive coupling;  
a translation coupling assembly comprising:  
a translation drive coupling; and  
an encoder assembly.

9. (New). The transmission of Claim 8 wherein the second axis and the fourth axis are generally parallel.

10. (New) The transmission of Claim 8 wherein the second axis and the fourth axis are generally parallel to a longitudinal axis of a cutter.

11. (New) The transmission of Claim 8 wherein the first axis and the second axis are at substantially right angles to one another.

12. (New) the transmission of Claim 8 wherein the third axis and the fourth axis are at substantially right angles to one another.

13 (New). The transmission of Claim 8 wherein the first transmission portion comprises at least one bevel gear, and wherein the second transmission portion comprises at least one bevel gear.